

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel claim 17 without prejudice.

Listing of Claims:

Claim 1 (Previously Presented). For use with an optical microscope, a stage assembly mountable on an optical microscope for orienting a sample into a desired focal position comprising:

an X-axis plate operable for rectilinear sliding in the X-axis direction;

a Y-axis plate mounted on the X-axis plate operable for rectilinear sliding in the Y-axis direction, the X-axis plate and the Y-axis plate defining an XY plate assembly;

a Z-axis plate mounted on the XY plate assembly configured to carry a sample to be investigated; and

a piezoelectric actuator mechanism interposed between the XY plate assembly and the Z-axis plate operable for rectilinear translation of the Z-axis plate, wherein the X-axis, Y-axis, and Z-axis plates each includes an internal opening configured to allow passage of transmitted light and viewing of the sample by an objective lens of the optical microscope.

Claim 2 (Previously Presented). The stage assembly of claim 1 wherein the piezoelectric actuator mechanism includes three spaced-apart piezoelectric actuators for engaging the Z-axis plate.

Claim 3 (Original). The stage assembly of claim 1 wherein the X-axis plate, Y-axis plate and Z-axis plate are arranged to locate the sample in proximity to the design focal position of the microscope.

Claim 4 (Original). The stage assembly of claim 2 wherein the piezoelectric actuators are mounted on the Y-axis plate and engage the Z-axis plate.

Claim 5 (Original). The stage assembly of claim 4 wherein the three spaced-apart piezoelectric actuators are operable to rectilinearly translate the Z-axis plate along the Z-axis direction in increments of less than 0.05 micrometers.

Claim 6 (Original). The stage assembly of claim 1 wherein the Z-axis plate is mounted on the XY plate assembly for travel therewith.

Claim 7 (Previously Presented). A method for use with an optical microscope to facilitate focusing of an image comprising the steps of:

providing an XY plate assembly including an X-axis plate rectilinearly slidable in the X-axis direction and a Y-axis plate mounted thereon rectilinearly slidable in the Y-axis direction;

positioning a Z-axis plate on the XY assembly and mounting a sample on the plate, wherein the X-axis, Y-axis, and Z-axis plates each includes an internal opening configured to allow passage of transmitted light and viewing of the sample by an objective lens of the optical microscope; and

rectilinearly translating the Z-axis plate along the Z-axis for bringing the sample into focus.

Claim 8 (Original). The method of claim 7 wherein the rectilinear translation of the Z-axis plate includes the step of engaging the Z-axis plate with a piezoelectric mechanism.

Claim 9 (Original). The method of claim 8 wherein the step of engaging the Z-axis plate is accomplished by piezoelectric actuators interposed between the XY plate assembly and the Z-axis plate.

Claim 10 (Original). The method of claim 7 wherein the step of mounting the sample includes mounting a slide insert on the Z-axis plate with the sample held thereby.

Claim 11 (Previously Presented) A stage assembly for positioning a sample into a desired focal position for viewing with an optical microscope comprising:

an XY plate assembly including an X-axis plate configured to slide in the X-axis direction and a Y-axis plate mounted on the X-axis plate configured to slide in the Y-axis direction;

a Z-axis plate mounted on the XY plate assembly;

a stage insert configured to selectively mount on the Z-axis plate and support the sample;

a piezoelectric actuator mechanism interposed between the XY plate assembly and the Z-axis plate configured to translate the Z-axis plate in the Z-axis direction, wherein the X-axis, Y-axis, and Z-axis plates each include an internal opening for viewing the sample on the stage insert with the optical microscope.

Claim 12 (Previously Presented) The stage assembly of claim 11, wherein the stage insert is dimensioned to position the sample proximal to the designed focal position of the optical microscope when mounted on the Z-axis plate.

Claim 13 (Previously Presented) The stage assembly of claim 11, wherein the piezoelectric actuator mechanism includes spaced-apart piezoelectric actuators for engaging the Z-axis plate.

Claim 14 (Previously Presented) The stage assembly of claim 13, wherein the spaced-apart piezoelectric actuators are mounted on the Y-axis plate and engage the Z-axis plate.

Claim 15 (Previously Presented). The stage assembly of claim 14, wherein the spaced-apart piezoelectric actuators are operable to rectilinearly translate the Z-axis plate along the Z-axis direction in increments of less than 0.05 micrometers.

Claim 16 (Previously Presented). The stage assembly of claim 11 wherein the Z-axis plate is mounted on the XY plate assembly for travel therewith.

Claim 17 (Cancelled)